Work Order ID 112065

January-29-14 8:29:36 AM

112065

Item ID: D4634-1
Revision ID:
Item Name: Fwd, Center Ceiling Panel
Start Date: 30/01/2014 **Start Qty:** 1.00 *1*
Required Date: 24/02/2014 **Req'd Qty:** 1.00 *1*
Reference:

Accept *N900040100*

Setup Start *NS1*
Stop *NS2*

Cust Item ID:
Customer:

Approvals: **Process Plan:** MP **Date:** 14-01-29
QC: _____ **Date:** _____

Tooling: _____ **Date:** _____
SPC (Y/N): _____ **Date:** _____

Run Start *NR1*
Stop *NR2*

Draw Nbr	Revision Nbr
D4634	E F BB

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
100		0.00							
100	HAND FINISHING THERMOFORMING					x1	____	____	MP 14/01/31
Thermoform	**Memo**	0.00							
Thermoforming Machine	Cut Blanks								
105		0.00							
105	Dry Material								
HandThermo	**Memo**	0.00				x1	____	____	MP 14/01/31
Hand Finishing Thermoforming	Dry Sheet as per QSI022 POLYCARBONATE								
	Temp: 250° F								
	Time IN: 5:00 pm 14/01/30								
	Time OUT: 6:00 am 14/01/31								

DQA: _____ Date: _____

DART AEROSPACE

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

- Rework ☐
- Scrap ☐
- Use-as-is ☐
- Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

- Skid-tube ☐
- Machining ☐
- Thermoforming ☐
- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General

- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function
- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence
- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge
- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

Work Order ID 112065

January-29-14 8:29:36 AM

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Approvals: **Process Plan:** _____ **Date:** _____
QC: _____ **Date:** _____

Tooling: _____ **Date:** _____
SPC (Y/N): _____ **Date:** _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110	THERMOFORMING MACHINE	0.00							
110 Thermoform Thermoforming Machine	**Memo** Thermoform as per Dwg. D4634-1 and Folio FTA144	0.00				x1			DL 14/01/31
	Dwg. Rev. E								
	Folio Rev. D								
	Visually inspect for proper formation and texture								
130	HAND FINISHING THERMOFORMING	0.00							
130 Thermoform Thermoforming Machine	**Memo** Trim to Finished Dimensions	0.00				x1			14/03/13
140	~~QC6~~ Inspect dimensions to drawing	0.00	DAS 16 9-89						
140 QC Quality Control	QC Dimensional Inspection **Memo** Fill in Inspection Sheet Rev A	0.00				x0			14/03/14

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

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- Large Fab ☐
- Crosstube ☐
- Small Fab ☐
- Finishing ☐
- Composite ☐
- Water Jet ☐
- Prod. Eng. Coor. ☐
- Rec/Store/Packaging ☐
- Supplier ☐
- Engineering ☐
- Quality ☐
- Other ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

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- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
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Stop *NR2*

Approvals: **Process Plan:** _____ **Date:** _____
QC: _____ **Date:** _____

Tooling: _____ **Date:** _____
SPC (Y/N): _____ **Date:** _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150 *150* QC Quality Control	QC5- Inspect part completeness to step on W/O **Memo** N/A	0.00 0.00							
160 *160* Packaging Packaging	Packaging **Memo** med Fab	0.00 0.00				(1)	SAD	14/03/13	
170 *170* QC Quality Control	QC21- Final Inspection - Work Order Release **Memo**	0.00 0.00					14-03-17 MF 14-3-14		

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
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Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
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Operator	☐									
Offset/Setup	☐									
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Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

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☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other _____

Picklist Print

January-29-14 8:29:41 AM

Work Order ID: 112065 *112065*

Parent Item: D4634-1 *D4634-1*

Parent Item Name: Fwd, Center Ceiling Panel

Start Date: 30/01/2014 **Required Date:** 24/02/2014

Start Qty: 1.00 **Required Qty:** 1.00

Comments: IPP Rev.A New Issue 12/05/07 DL VERIFIED BY:JLM IPP Rev. B Dwg. Update 13/07/09 DL verf:DD IPP Rev C Dwg Update, Material Change 13/12/18 DL IPP Rev D Dwg Update Change Mtl Qty. 14/01/20 DL

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MLEXS.093-F6006-07		Purchased	No			100	sf	1,385.760	17.3	18			
MLEXS.093-F6006-07									**				
GE PLASTICS LEXAN SHEET													

Location	Loc Qty	Loc Code
MAT023	1385.76	
114459	229.26	
123105	38	
124501	1118.5	

18 sq ft

14/02/03

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

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Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

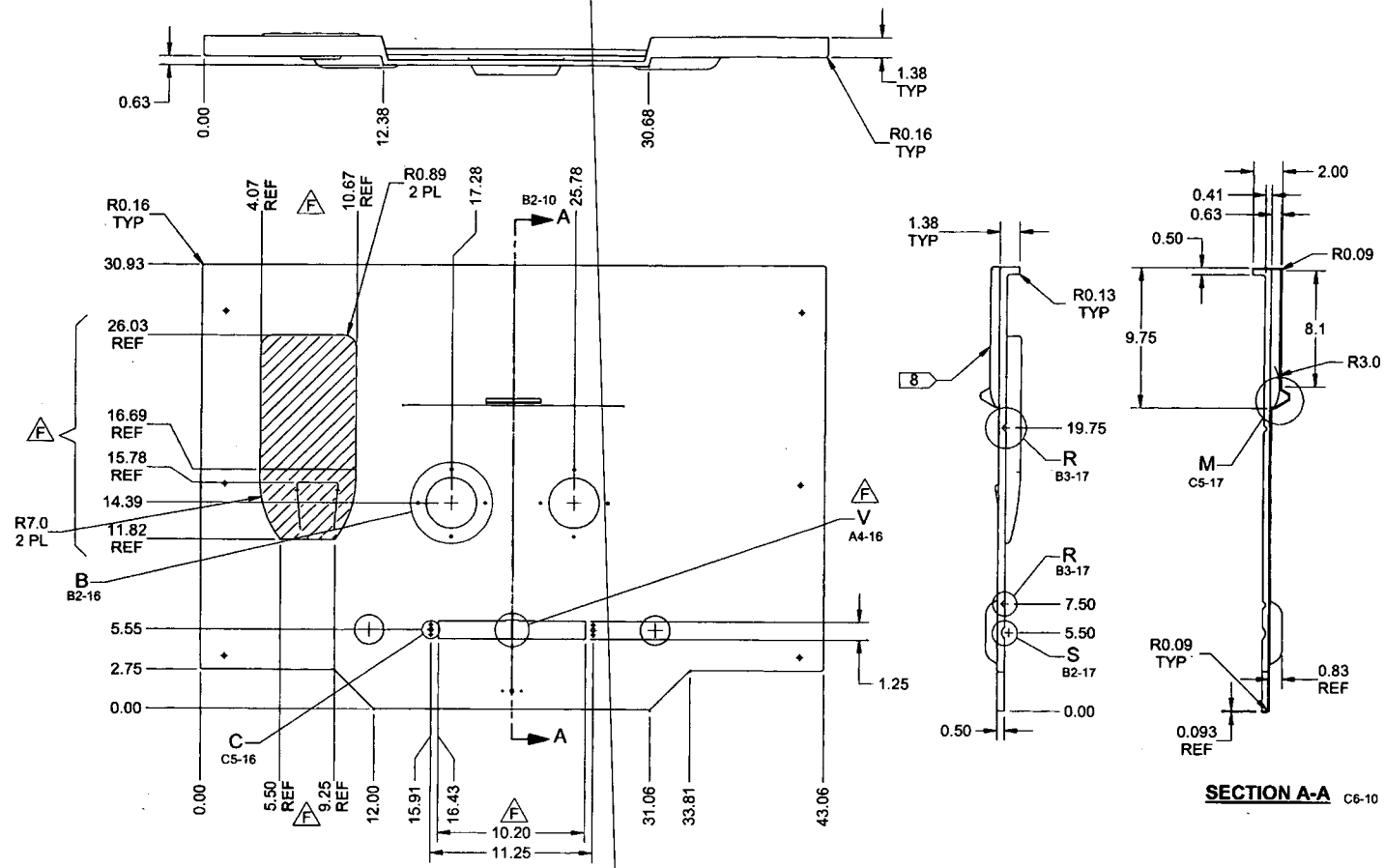
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☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other



SECTION A-A C6-10

112026

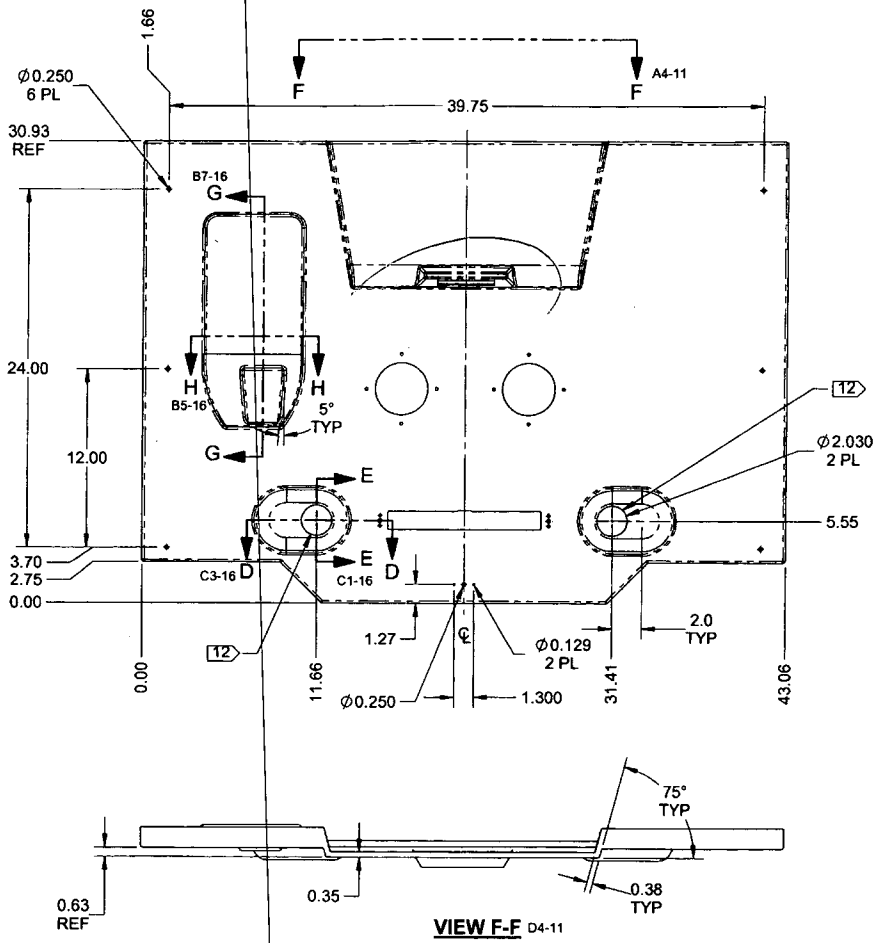
NOTES:
1) MATERIAL: F6006 SUEDE/POLISHED GY5B133 LIGHT GREY LEXAN SHEET 0.093 THICK (REF DART SPEC MLEXS.093-F6006-07)
2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 5.65 lbs
8) TEXTURE ON THIS SIDE
9) 0.14 RADIUS NOT SHOWN FOR CLARITY
10) DRILL & TRIM D4634-1 PER TOOL DT9836
11) THERMOFORM PER QSI 022 USING DT9844 TOOL
MIN. THICKNESS AFTER FORMING:
SHADED AREA = 0.020
EDGES = 0.060
ELSEWHERE = 0.070
12) LOCATE ϕ2.030 AT CENTER OF PROTRUDED SURFACE AS SHOWN

D4634-1 FWD, CENTER CEILING PANEL

RELEASED
2014 FEB 25

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED	SC	DRAWING NO. D4634 REV. F
MFG. APPR.		SHEET 10 OF 17
APPROVED		TITLE CENTER CEILING PANELS SCALE NTS
DE APPR.		
DATE 14.02.03		

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VIEW F-F D4-11

D4634-1 FWD, CENTER CEILING PANEL
AUXILIARY VIEW

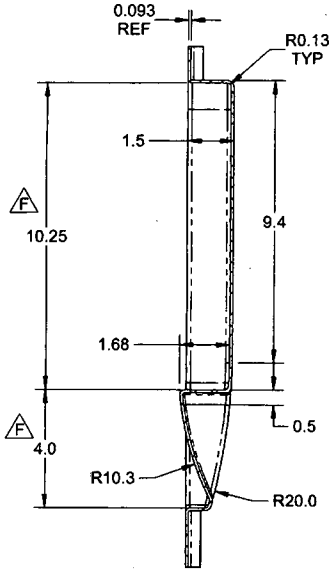
RELEASED
2014 FEB 25

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED		DRAWING NO. D4634 REV. F
MFG. APPR.		SHEET 11 OF 17
APPROVED		TITLE CENTER CEILING PANELS SCALE NTS
DE APPR.		
DATE 14.02.03		

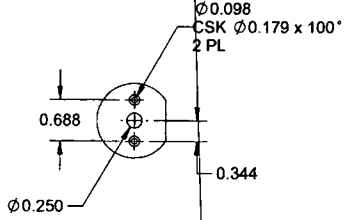
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1A4 129

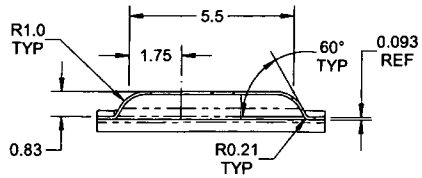
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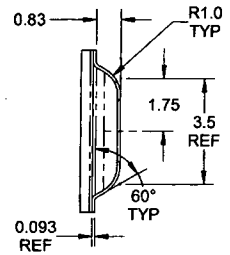
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SCALE 4X



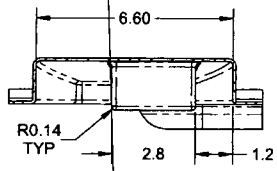
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SCALE 4X



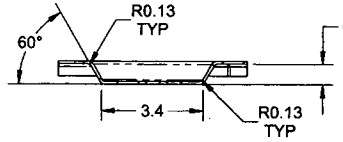
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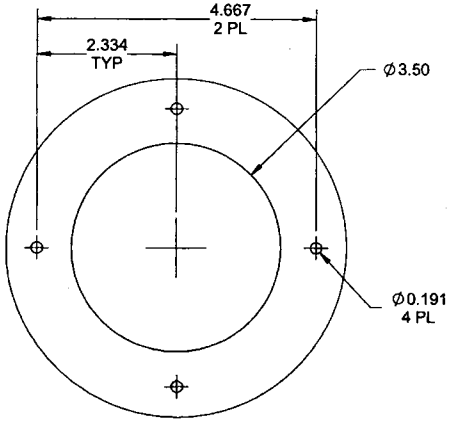
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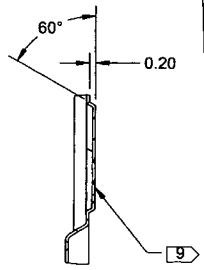
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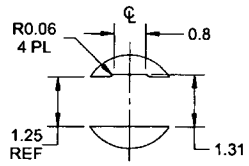
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SCALE 2X



DETAIL B B7-10
SCALE 4X
2 PL



DETAIL L B2-13 C2-13 B2-14 C2-14
SCALE 4X
TYP

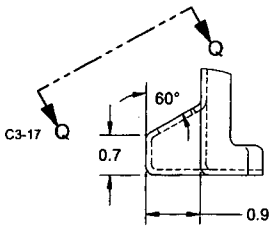


DETAIL V C4-10 B4-12 C4-14
SCALE 2X
SIMILAR

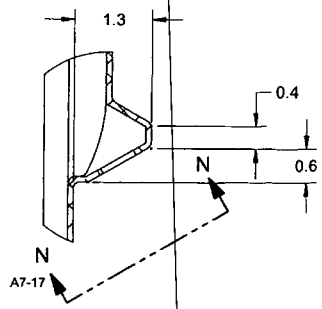
RELEASED
2014 FEB 25

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	DRAWING NO. D4634 REV. F
CHECKED		SHEET 16 OF 17
MFG. APPR.		TITLE CENTER CEILING PANELS
APPROVED		SCALE NTS
DE APPR.		
DATE	14.02.03	

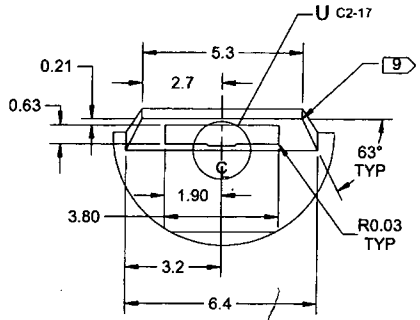
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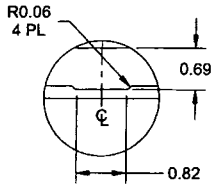
DETAIL P B3-14
SCALE 2X



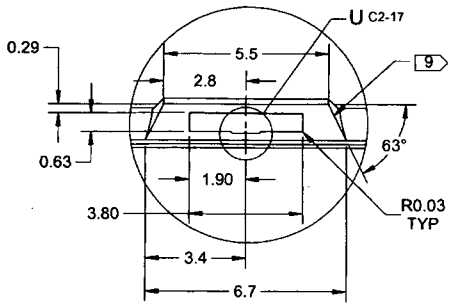
DETAIL M C3-10
SCALE 2X



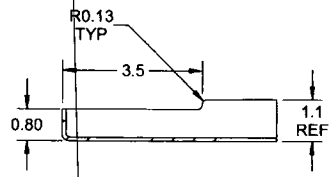
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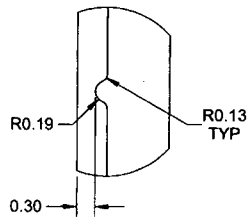
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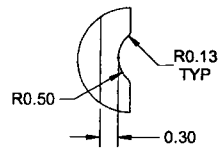
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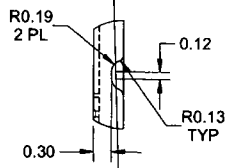
SECTION O-O B6-14
SCALE 1.3X



DETAIL R B3-10 C3-10 B2-12
SCALE 4X



DETAIL S B3-10 C2-12
SCALE 4X



DETAIL T C2-14
SCALE 4X

RELEASED
2014 FEB 25

DESIGN	RF	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	
CHECKED	SC	DRAWING NO. D4634 REV. F
MFG. APPR.		SHEET 17 OF 17
APPROVED		TITLE CENTER CEILING PANELS SCALE NTS
DE APPR.		
DATE	14.02.03	

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DART AEROSPACE LTD

Description:	Fwd, Center Ceiling Panel	**Work Order:**	112065
Inspection Drawing:	4634-1	**Rev:** F	**Part Number:** D4634-1

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
24.00	+/- 0.030	24.00	✓		tape	SFAB-21
12.00	+/- 0.030	12.00	✓			
39.75	+/- 0.030	39.75	✓			
11.66	+/- 0.030	11.66	✓			
31.41	+/- 0.030	31.41	✓			
5.55	+/- 0.030	5.55	✓			
1.66	+/- 0.030	1.66	✓			SFAB-21
Ø 2.030	+0.002 -0.001	Ø 2.030	✓		Vern	SFAB-08
Ø 3.50	+0.002 -0.001	Ø 3.50	✓			
Ø 0.191	+0.005 -0.001	Ø 0.195	✓			
2.334	+/- 0.010	2.334	✓			
4.667	+/- 0.010	4.667	✓			
0.688	+/- 0.010	0.688	✓			
Ø 0.098	+0.004 -0.001	Ø 0.099	✓			
3.80	+/- 0.030	3.80	✓			
0.63	+/- 0.030	0.63	✓		Vern.	SFAB-08
10.20	+/- 0.030	10.20	✓		Vern	
11.25	+/- 0.030	11.25	✓		Vern	SFAB-08

Measured by: SAD	**Checked By:** DAS 16 9-89	**QC inspector:** DAS 16 9-89	**Engineering Approval** *(if necessary)*:
Date 14/03/14	**Date** 14/03/14	**Date** 14/03/14	**Date**